

# (12) United States Patent Fehr et al.

## (54) INSTALLATION AND SEALING OF A BATTERY ON A THIN GLASS WAFER TO SUPPLY POWER TO AN INTRAOCULAR **IMPLANT**

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CPC ......... G02C 7/085; G02B 3/14; A61F 2/1624 See application file for complete search history.

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### ABSTRACT (57)

Many modem implantable ophthalmic devices include electronic components, such as electro-active cells, that can leak harmful substances into the eye and/or surrounding tissue. In the implantable ophthalmic devices disclosed herein, electronic components are hermetically sealed to facilitate mechanically connecting components of an implantable ophthalmic device. Furthermore, the device includes at least one battery with a surface comprising electrical contact portions, a housing for the at least one battery, a first wafer bonded to the housing such that the housing and the first wafer form a hermetically sealed surface around the battery, and an electronic circuit electrically connected to the electrical contact portions of the battery.

### 32 Claims, 10 Drawing Sheets

